

IN THE SPECIFICATIONS

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Example 1

Two-three heated moles of ammonia to one mol of heated carbon dioxide, heated at 160° to 210° C, is forced through a reactor which has an aqueous solution or oil-water slurry of ammonia and carbon dioxide which is being circulated at 160° to 210° C and under 2-6000 psi to form ammonium carbamate which when heated lose 1 mol of water thereby producing urea. The urea is in the aqueous solution after being removed from the reactor is distilled to remove ammonium carbonate and undecomposed ammonium carbamate, which dissociate to ammonia and carbon dioxide. The urea is separated from the concentrated aqueous still-residue at a low temperature by crystallization or by a form of spray-drying known as periling. The temperature is kept low to prevent the formation of biuret. 30 parts by weight of water are added to 100 parts by weight of urea which is then heated to above the melting point of urea and up to about 160-degree C for 0.1 to 1 hour. Ammonia evolves from the melted urea thereby producing a partially hydrolyzed amino condensation compound (a mixture of a small amount of ammonium carbonate and partially hydrolyzed biuret). The partially hydrolyzed amino condensation compound (ammonium polyaminocarbamate) is ground into a fine powder.

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Example 5

~~about~~ About 100 parts by weight of a mixture of granular cyanuric acid and cyamelide, produced by heating urea, are mixed with 20 parts by weight of water then heated to 120-160